Chronically decreased GFR and cardiovascular risk in living kidney donors

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To the Editor: I read with great interest the letters by Wan *et al.*[1] and Garg.[2]

The authors discussed the possibility and consequences of labeling former kidney donors with estimated GFR <60 ml per min per 1.73 m^2 as chronic kidney disease patients. According to NKF K/DOQI guidelines that established the current classification of chronic kidney disease, it is possible that GFR 30–59 ml per min per 1.73 m^2 could also be normal in individuals after unilateral nephrectomy.[3] Therefore 'chronically decreased GFR' could be the more appropriate term to name the condition of these subjects in the absence of any additional marker of kidney damage.

Both authors agree about the possibility of increased cardiovascular risk in these patients and then emphasis the need of research on the prognostic significance of a reduced estimated GFR in this population. We recently studied the frequency and severity of coronary artery calcification in 101 former kidney donors to test the hypothesis that decreased GFR is associated with increased coronary artery calcification.[4] The median post nephrectomy duration was 64.7 months and mean GFR was 75 ml per min per 1.73 m^2. The frequency or severity of coronary artery calcification was not increased in these former kidney donors. These results could be at least partially reassuring the safety of kidney donation in carefully selected donors. Certainly, this reassurance should not shadow the importance of healthy life style behavior and yearly regular follow-ups after kidney donation.

1. Wan RK, Spalding E, Winch D *et al.* Reduced kidney function in living kidney donors. *Kidney Int* 2007; **71**: 1077.
2. Garg AX. Response to 'Reduced kidney function in living donors'. *Kidney Int* 2007; **71**: 1077.
3. National Kidney Foundation. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification and stratification. *Am J Kidney Dis* 2002; **39**(Suppl 1): S57–S58.
4. Seyahi N, Kahveci A, Bolayirli M *et al.* Coronary artery calcification and chronically decreased GFR in living kidney donors. *Am J Kidney Dis* 2007; **49**: 143–152.

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Response to 'Chronically decreased GFR and cardiovascular risk in living kidney donors'

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We welcome Dr Seyahi's[1] contribution to the uncertainty surrounding the impact of mildly reduced kidney function on future cardiovascular risk. This debate has been generated by numerous large retrospective observational studies. These studies are unable to determine if the observed association between mildly reduced glomerular filtration rate (GFR) and cardiovascular risk is causal or is explained by comorbid conditions that lead to kidney damage. Studies of living kidney donors offer an opportunity to test the hypothesis that reduced GFR directly causes cardiovascular disease, because kidney donors have an abrupt, isolated reduction in GFR in the absence of other major comorbid illnesses or cardiovascular risk factors. However, the low absolute cardiovascular event rate in these subjects after nephrectomy means that studies to adequately test the hypothesis will require large cohorts, more than 10 years follow-up, and appropriate selection of control subjects. In this respect, we are sure Dr Seyahi will acknowledge that their data on 101 kidney donors followed for a median of 5 years showing no coronary calcification offer some reassurance, but do not reject the hypothesis.

Counseling patients with mildly reduced GFR will remain difficult until these uncertainties are clarified, and we hope that Dr Seyahi's research will stimulate others to analyze cardiovascular risk in kidney donors.

In the meantime, the labels 'chronically decreased GFR' and 'chronic kidney disease' are likely to seem equally imprecise and of concern to the patient with mildly reduced GFR.

1. Seyahi N. Chronically decreased GFR and cardiovascular risk in living kidney donors. *Kidney Int* 2008; **73**: 509.

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Response to 'Chronically decreased GFR and cardiovascular risk in living kidney donors'

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As we promote living kidney donor transplantation as the preferred treatment option for kidney failure, there is now